



Monocacy River Sustainability Commission

Hans Schmidt

Assistant Secretary
Office of Resource Conservation
May 27, 2021



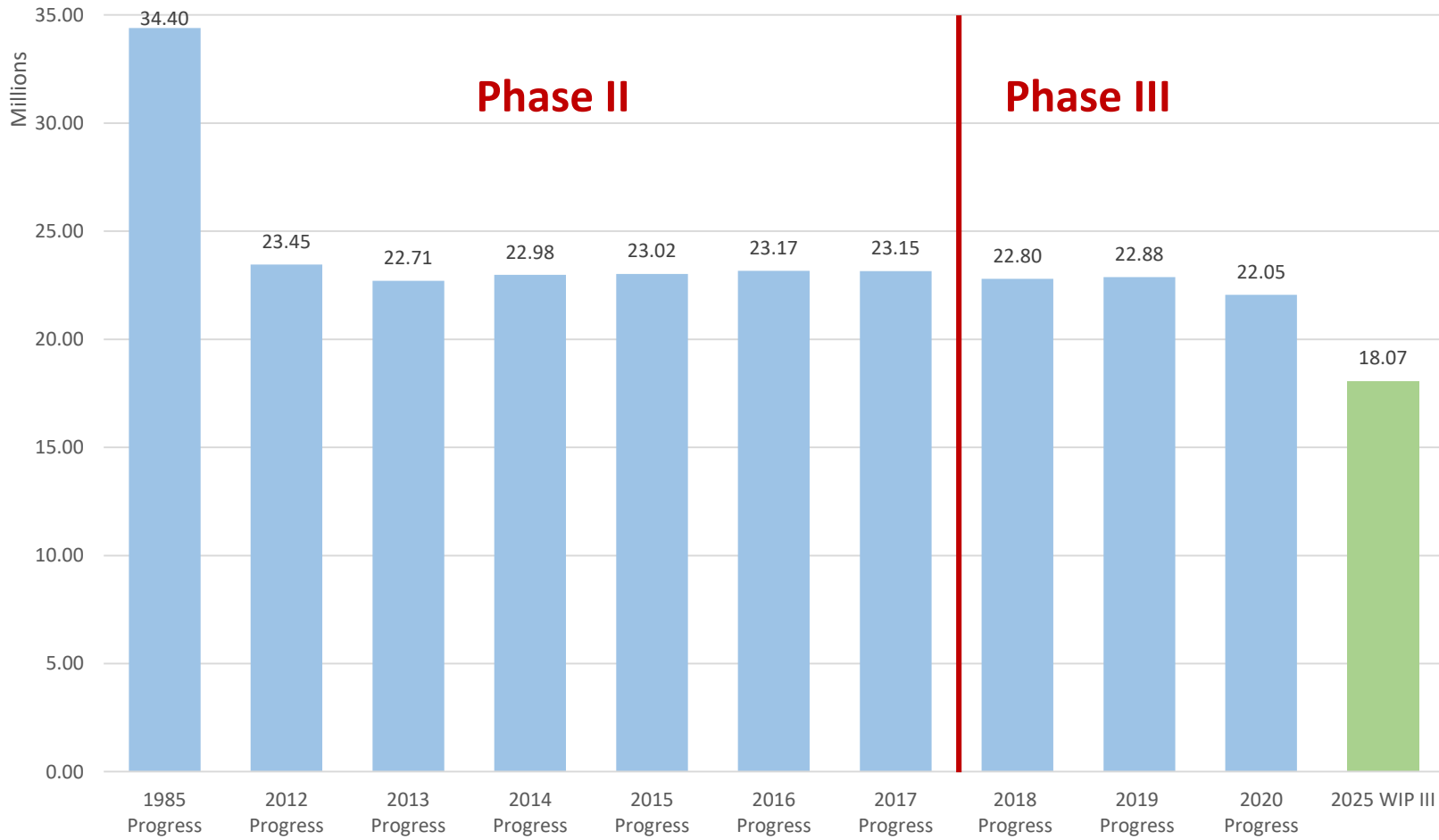
Office of Resource Conservation

Five key areas - Program Planning and Development, Conservation Grants, Nutrient Management, District Operations, Watershed Implementation

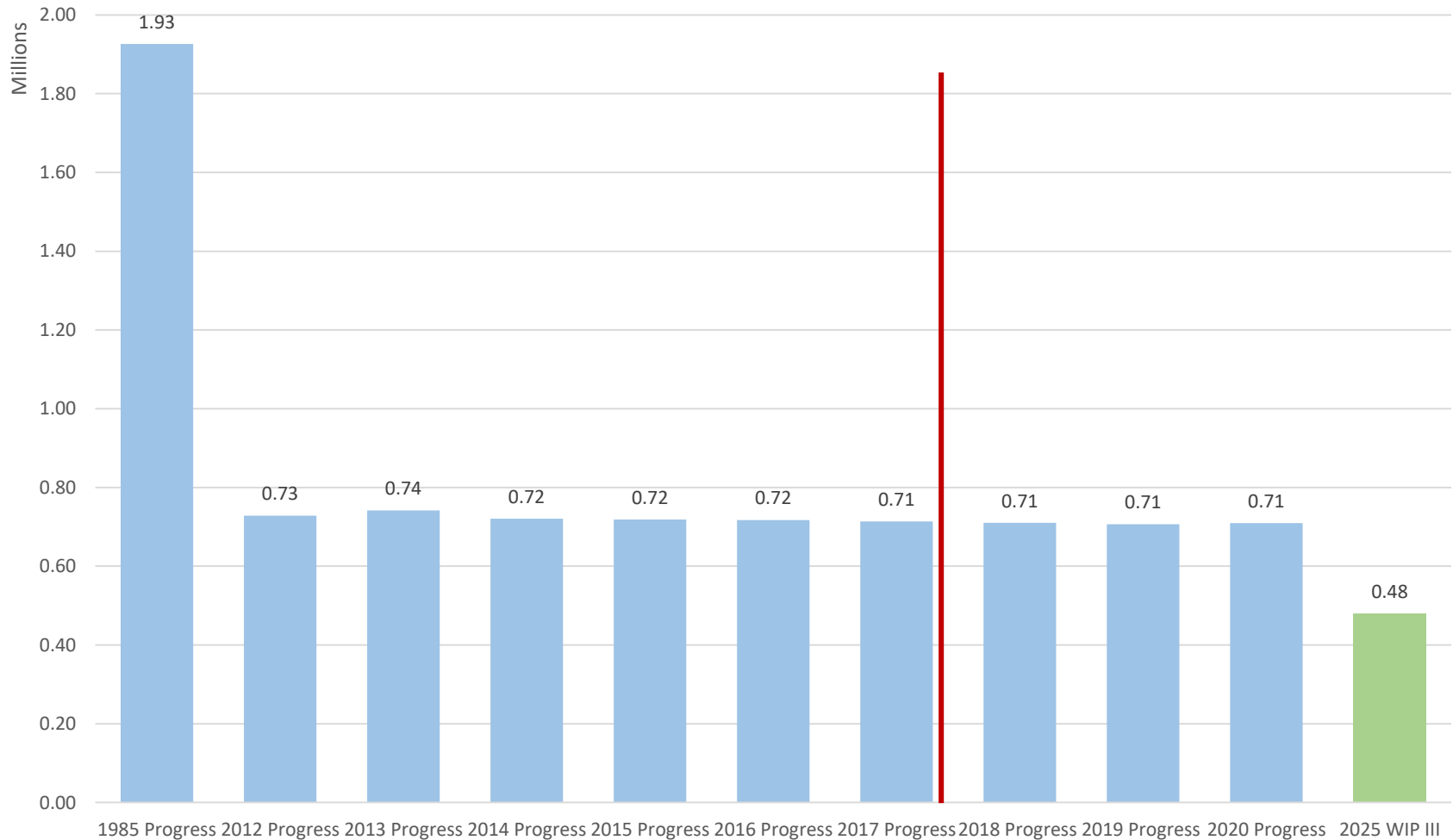
MDA works closely with Maryland farmers and soil conservation districts to plan and implement conservation practices and programs that balance crop and livestock production with the need to protect natural resources.

The office provides a range of educational, financial, technical assistance, and regulatory programs to support Maryland agriculture and protect natural resources. The office works with a number of local, state, and federal agencies, while implementing policies established by the State Soil Conservation Committee.

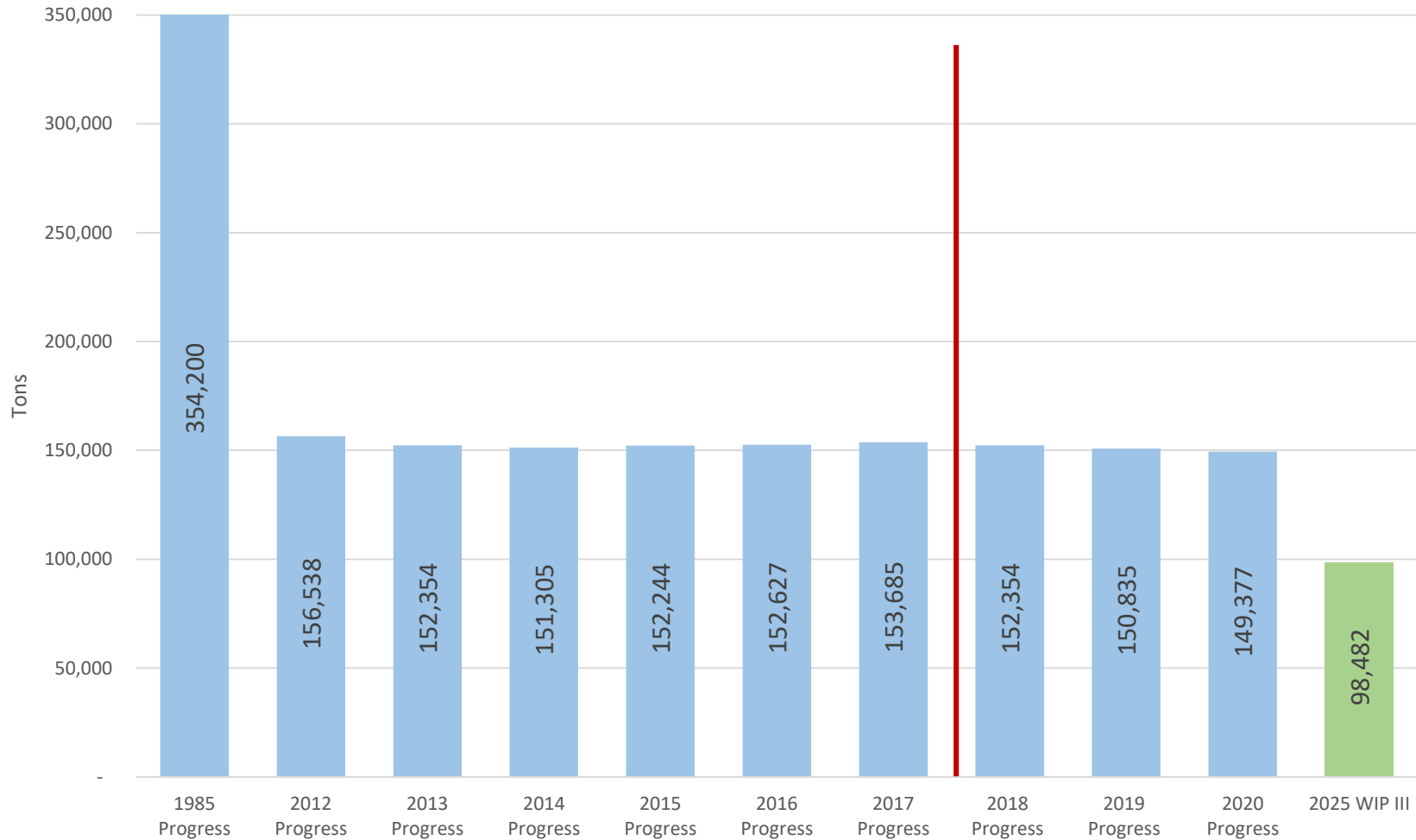
Pounds N delivered to Bay: 2020



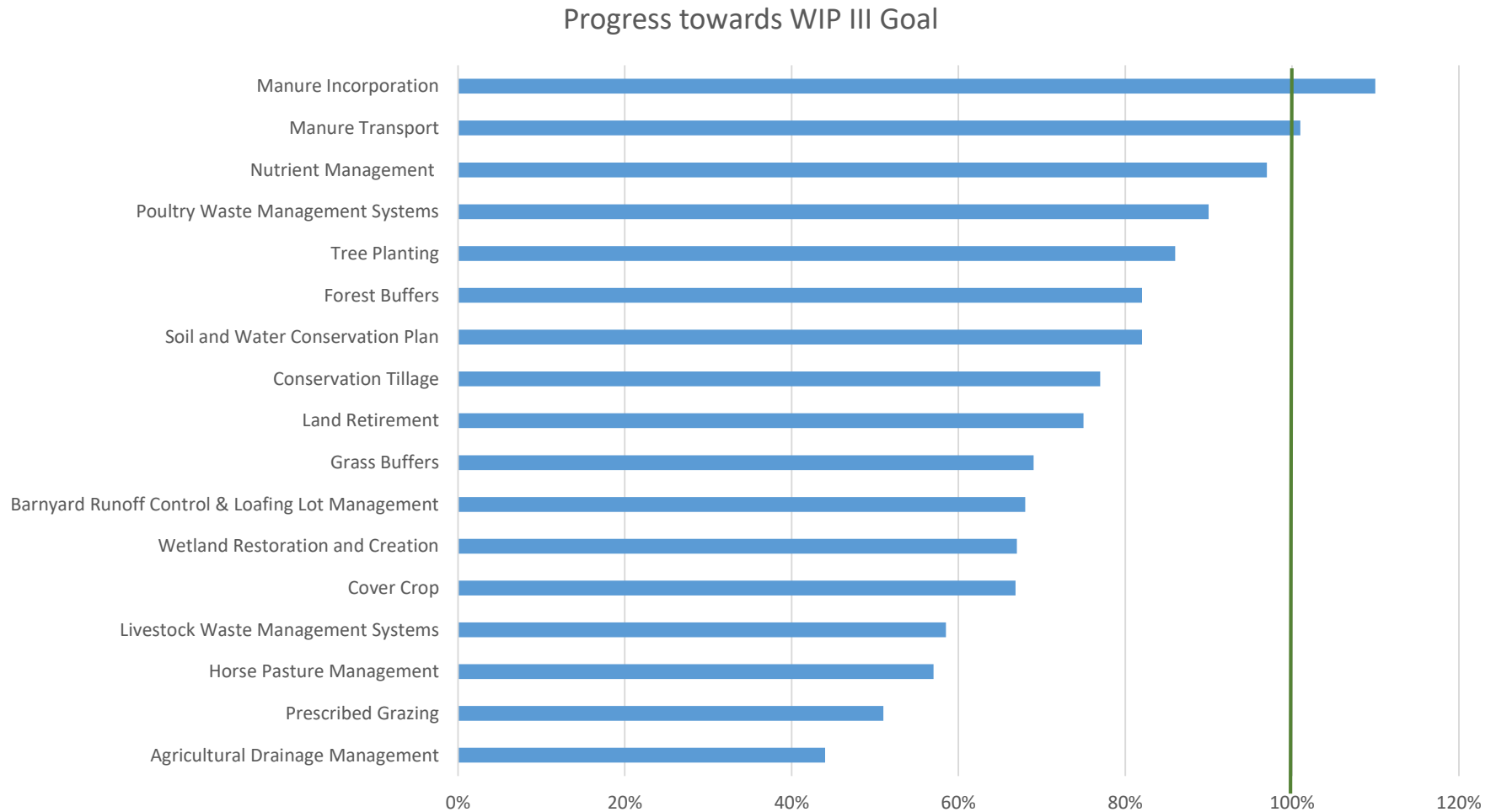
Pounds P delivered to Bay: 2020



Sediment delivered to Bay: 2020



Progress Towards WIP III 2025 Goals



Nutrient Management Program

- The Nutrient Management Program protects water quality in the Chesapeake Bay and its tributaries by ensuring that farmers and urban land managers apply fertilizers, animal manure and other nutrient sources in an effective and environmentally sound manner.
 - Agriculture
 - Urban

11 inspectors across the state

Annual Implementation Review- due March 1

Phosphorous Management Tool (PMT)- full implementation July 1, 2021

District Operations

- The Office of Resource Conservation provides the state's 24 soil conservation districts with operating funds and staffing support to deliver local soil conservation and water quality programs. Farmers rely on the technical expertise of engineering technicians and field specialists working in district offices to help them design and install best management practices on their farms to protect natural resources and comply with environmental laws.



Maryland
Department of Agriculture
Office of Resource Conservation

Maryland Agricultural Water Quality Cost-Share Program

Providing grants to help farmers
protect natural resources and
comply with environmental
laws and regulations



- The General Assembly created the MACS Program in 1982 as a key component of the Chesapeake Bay Agricultural Initiative
- The goal of the MACS Program is to provide financial support to farmers for the installation of BMPs that control and reduce agriculturally related water pollution
- 65% - 87.5% of eligible cost for over 30 conservation practices (\$50,000/\$150,000 or \$200,000/\$300,000)
- State (BPW approval) & Federal funding sources
- ~\$6mil - \$8mil annually
- 10 – 15 year Agreement between MDA, SCD & farmer/landowner
- Subject to Spot Checks to ensure compliance
- MACS Technical Advisory Committee
- State Soil Conservation Committee

CRP

Conservation Has Its Rewards...



- Federal-state partnership that pays top dollar to landowners who agree to take environmentally sensitive cropland out of production for 10 to 15 years to plant:
 - streamside buffers
 - establish wetlands
 - protect highly erodible lands
 - create wildlife habitat
- Provides steady, dependable land rental income
- This completely voluntary program offers:
 - a one time signing bonus of up to \$250 an acre
 - attractive annual rental and incentive payments
 - cost-share assistance for streamside buffers, wetlands, livestock fencing and more
- 100,000 acre statewide goal
- Landowners have the option of selling a permanent easement on their land to the State of Maryland

MDA Conservation buffer initiative



Initiative Summary

- Program Objective: to meet the Maryland Phase III WIP goals, MDA is offering a pilot program for fiscal year 2021 to advance the adoption of riparian buffers
- Flexible management
- Flexible contract length
- **No** nutrient application
- One year pilot – we can evolve program!

Eligibility

- Lands that have an established cropping history in pasture, commodity crops, hay or have been historically enrolled in a conservation program for at least one year out of the last five years, 2014 – 2019, and are adjacent to watercourses or field ditches, are eligible to apply.



Maryland
Department of Agriculture
Office of Resource Conservation

Maryland's Manure Transport Program

Providing Grants to Help Farmers
Manage Manure



Now Less Paperwork—More Hauling

- Helps poultry, dairy, beef and other animal producers cover the costs of transporting excess manure off their farms
- Animal producers with high soil phosphorus levels or inadequate land to spread their manure can receive cost-share assistance of up to \$28 per ton to transport excess manure to other farms or alternative use facilities that can use the product safely
- Poultry Industry contributes 50% of transportation costs
- FY2020 \$1,382,822 in state grants + \$455,681 in poultry match
- 309,374 tons of manure transported in FY2020



Maryland
Department of Agriculture
Office of Resource Conservation

The Maryland Income Tax Subtraction Modification for Conservation Equipment



- Helps farmers offset costs associated with buying certain types of conservation equipment to control soil erosion, manage nutrients and protect water quality in streams, rivers and the Chesapeake Bay
- The subtraction modification allows farmers to subtract eligible equipment purchases from taxable income on Maryland individual and corporate tax returns
- Equipment includes:
 - Conservation Tillage / Vertical Tillage Implements
 - Deep No-Till Rippers
 - Manure Spreading/Injecting Equipment
 - GPS, Optical Sensing/Nutrient Applicators
- All equipment must be retained for three years following the tax year that the subtraction is taken

Helping Farmers Bridge the Cost-Share Gap

Maryland's Low Interest Loans
for Agricultural Conservation



- Available to help farmers install best management practices (BMPs) on their farms, purchase conservation equipment and adopt new technologies that help protect natural resources and safeguard water quality in streams, rivers and the Chesapeake Bay
- LILAC loans provide farmers with up-front funds needed to bridge the cost-share gap and get a project up and running
- LILAC loans may also be used to
 - purchase certain types of equipment to control soil erosion
 - inject manure into the soil or manage crop nutrients
 - adopt new technologies
 - integrated optical sensing equipment
 - nutrient application equipment
 - global positioning systems that manage agricultural nutrient applications
- Guaranteed by the Maryland Water Quality Revolving Loan Fund, LILAC loans are typically offered at three to four percent below market rates and are available at lending institutions statewide. Read on to learn more.



Maryland
Department of Agriculture
Office of Resource Conservation

Maryland's Cover Crop Program

Providing grants to help farmers
protect the Chesapeake Bay

MACS

- Provides grants to help farmers offset seed, labor, and equipment costs associated with planting cover crops
- Maryland has earmarked approximately \$22.5 million for this year's program
- Farmers can receive up to \$75/acre to plant traditional cover crops on their fields this fall
- Various options including rye, barley, wheat, brassicas, legumes & forage radish
- All seed purchased for cover crops must be tested and labeled following Maryland Seed Law and Regulations
- Applicants must be in good standing with MACS and in compliance with Maryland's nutrient management requirements.
- Soil conservation districts conduct field checks on a percentage of certified acres to verify program compliance

Maryland's Healthy Soils Program

- 32 members Advisory board was appointed by Secretary in late 2019
- Represents producers, non-profit organizations, state and agricultural agencies, and academia
- Charged to support department develop incentive based program consistent with the 2017 legislation
- Reviewing a preliminary list of conservation practices associated with soil health:
 - Informed by extensive literature review of carbon sequestration performed by Dr. Sara Via, UMD
 - Aligns with GGRA Plan policies and strategies
 - Aligns with state's WQ plan (Phase 3 Watershed Implementation Plan)

Grant objectives

- Direct farmer assistance
 - Technical **and** financial
 - Multi-specie and extended season cover crop
 - Precision nutrient management,
 - Conservation tillage, or
 - Prescribed grazing
- Soil health data assessments – advance our collective knowledge
- Calibrating Nutrient Trading Tool for carbon (beta in June 2021)
- Staff training (soil conservation districts and crop advisors)
- Outreach
- Findings will be shared and discussed through the MDA Advisory Committee to inform the further development of the state program



Farming for HEALTHY SOIL



You're Invited!

ATTENTION FARMERS:

The Maryland Department of Agriculture has received a three year, \$1 million grant from the National Fish and Wildlife Foundation's Chesapeake Bay Stewardship Fund to promote healthy soil practices to farmers.

The grant will provide participating farmers with technical assistance, as well as financial assistance ranging from \$10 to \$55 per acre, per year to install key soil health practices. Funding for soils data sampling is also available. *Grant partners include the following organizations:*

We are seeking farmers to enroll study fields in any of the following:

- Conservation Tillage
- Multi-Species Cover Crops
- Extended Season Cover Crops
- Prescribed Grazing
- Precision Nutrient Management

ACT NOW! Please contact:

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CHESAPEAKE BAY FOUNDATION
Saving a National Treasure



SHORE RIVERS



FUTURE HARVEST
Chesapeake Alliance for Sustainable Agriculture



UNIVERSITY OF
MARYLAND
EXTENSION

Solutions to your community



Maryland's Animal Waste Technology Fund

Maryland farmers follow nutrient management plans when fertilizing crops and are implementing phased-in phosphorus management regulations that may limit their use of manure as a nutrient source.

To help producers comply with its new phosphorus management regulations and remain profitable, Maryland is investing in innovative technologies that add value to the farm business model.

Established in 2013, the Animal Waste Technology provides grants to companies that demonstrate new technologies on farms and provide alternative strategies for managing animal waste. These technologies may generate energy from animal waste, reduce on-farm waste in local streams, and repurpose manure by creating marketable fertilizer and other products and by-products.

Current Projects



Project Name	Animal Type and Location	State Funding	Technology	Status
Biomass Heating Solutions, Inc. (BHSL)	Poultry Double Trouble Farm Dorchester County	\$970,000	Fluidized bed combustion (Thermochemical)	Project complete/final reported submitted
Green Mountain Technologies, Inc. (GMT)	Horse Days End Farm Howard County	\$150,790	In vessel composter/turnkey	Project complete/final report issued
Green Mountain Technologies, Inc.	Dairy Cattle Glamour View Farm Frederick County	\$237,520	In vessel composter/turnkey	Project complete/final report issued
Veteran Compost	Livestock Anne Arundel County	\$350,302	Aerated Static Pile Composting	Prelim construction and securing permits

Current Projects



Project Name	Animal Type and Location	State Funding	Technology	Status
Planet Found Energy Development (PFED)	Poultry Millennium Farms Worcester County	\$676,144 (MDA) \$900,232 (MEA)	Anaerobic digestion with nutrient separating system	Project complete / final report submitted
Planet Found Energy Development (PFED)	Poultry Millennium Farms Worcester County	\$222,000	Nutrient recovery and bagging system	Production and sales underway
CleanBay Renewables	Poultry Litter Somerset County	\$1,400,000	Thermophilic Anaerobic Digester with Nutrient Capture System	Securing final permits and nearing financial closing
Kilby Farms, LLC	Dairy Kilby Farms Cecil County	\$1,850,412 (MDA) \$115,500 (MEA)	Anaerobic digestion	Construction near complete. Energy being produced
International BioRefineries, LLC	Poultry Litter Wicomico County	\$1,947,490	Fast pyrolysis (rapid thermal decomp.)	Construction in progress

Multiple drivers reflecting MD as a national leader

Water Quality

- Maryland Agricultural Water Quality Cost-Share Program (MACS) - state's premier program since 1984 to address WQ
- ~\$30 million annually for structural practices and cover crops
- **Chesapeake Bay TMDL by 2025**

Soil Health

- **2017 legislation**
- Sets MDA as state lead
- Charges department to develop a program that improves health, yield, and profitability of soils; increases biological activity and carbon sequestration; and increases practice adoption

GhG Reduction

- Greenhouse Reduction Emissions Act of 2009 (GGRA)
- **Updated in 2016 to a goal of 40% reduction by 2030 (2006 baseline)**
- State action plan is currently being updated. Includes Healthy Soils

- Maryland has a long history of conservation adoption - #1 and #2 nationally in cover crops and conservation tillage as a percentage of acres – and will continue to promote practice-based programs with co-benefits
 - Healthy Soils Advisory Committee
 - Grant projects focused on farmer engagement
 - Partner collaborations
 - Permanent seat on Maryland Commission on Climate Change
 - U.S. Climate Alliance membership
- Programs administered by MDA and local Soil Conservation Districts

Thank you